

# Notice of Allowability

Application No.

10/780,909

Examiner

Michael J. Feely

Applicant(s)

WILKES ET AL.

Art Unit

1712

## -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 9/1/05.
2. ☒ The allowed claim(s) is/are 4-7 and 20-30.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 1105.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mary E. Goulet (Reg. No. 35,884) on November 11, 2005.

The application has been amended as follows:

*In the claims:*

4. (Currently Amended) The method of claim 7, wherein a catalyst is present for the reaction step (a).
6. (Currently Amended) The method of claim 7, wherein the epoxidized soybean oil is converted to carbonated soybean oil without any significant side reactions occurring.
7. (Currently Amended) A method of producing a nonisocyanate polyurethane network comprising:
  - (a) reacting an epoxidized soybean oil (ESBO) with carbon dioxide to obtain a carbonated soybean oil; and
  - (b) reacting the carbonated soybean oil with a polyamine having an amine functionality of two or higher to obtain a nonisocyanate polyurethane network.
20. (Currently Amended) A method of making a nonisocyanate polyurethane network, comprising mixing and reacting:
  - (1) a carbonated vegetable oil; and
  - (2) a polyamine having an amine functionality of at least two;

Art Unit: 1712

wherein a nonisocyanate polyurethane network is formed.

21. (Currently Amended) The method of claim 20, wherein the carbonated vegetable oil and polyamine are mixed stoichiometrically at or within nearly balanced stoichiometry.

23. (Currently Amended) The method of claim 20, wherein the polyamine is selected from the group consisting of ethylenediamine (ED), hexamethylenediamine (HMD), and tris(2-aminoethyl) amine (TA).

25. (Currently Amended) A polyurethane network comprising: a nonisocyanate polyurethane network produced from a carbonated vegetable oil and a polyamine having an amine functionality of two or higher.

26. (Currently Amended) The method of claim 20, wherein the epoxidized vegetable oil is carbonated at atmospheric pressure.

27. (Currently Amended) A method of producing a foam of a non-isocyanate polyurethane network, comprising:

(a) reacting an epoxidized vegetable oil with carbon dioxide to form a carbonated vegetable oil;

(b) reacting the carbonated vegetable oil with a polyamine having an amine functionality of two or higher to obtain a non-isocyanate polyurethane network; and

(c) processing the non-isocyanate polyurethane network into a foam.

28. (Currently Amended) The method of claim 27, wherein the foam is a rigid foam.

29. (Currently Amended) The method of claim 27, wherein the foam is a flexible foam.

*Allowable Subject Matter*

2. Claims 4-7 and 20-30 are allowed.
3. The following is an examiner's statement of reasons for allowance: Rappaport et al. (US Pat. No. 5,175,231) and Rappaport (US Pat. No. 6,218,480) disclose similar non-isocyanate polyurethane networks; however, there is no teaching or suggestion in the prior art to use an epoxidized vegetable oil as a starting material for these non-isocyanate polyurethane networks.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

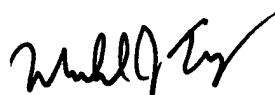
Art Unit: 1712

*Communication*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Feely whose telephone number is 571-272-1086. The examiner can normally be reached on M-F 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael J. Feely  
Primary Examiner  
Art Unit 1712

November 14, 2005

**MICHAEL FEELY**  
**PRIMARY EXAMINER**